

Appl. No. 10/046,542  
Response dated April 21, 2005  
Reply to Office action of April 5, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of enhancing an immune response to an antigen comprising administering an effective amount of an agent that can augment the level of a TAP molecule in a target cell bearing the antigen to a cell or animal in need thereof wherein the agent is a nucleic acid sequence comprising a sequence encoding a TAP molecule and wherein administration of the agent enhances the immune response to the antigen.
2. (Canceled)
3. (Original) A method according to claim 1 wherein the target cell is a virally infected cell.
4. (Original) A method according to claim 1 wherein the target cell is a tumor cell.
5. (Currently amended) A method according to claim 1 2 wherein the TAP molecule comprises TAP-1.
6. (Currently amended) A method according to claim 1 2 wherein the TAP molecule comprises TAP-2.
7. (Currently amended) A method according to claim 1 2 further comprising administering a nucleic acid sequence encoding an antigen.
8. (Original) A method according to claim 7 wherein the antigen is a viral antigen.

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9. (Original) A method according to claim 7 wherein the antigen is a tumor antigen.
10. (Currently Amended) A method according to claim 1 2 further comprising administering a growth factor, chemokine, accessory molecule or a gene inducible by retinoic acid, tumor necrosis factor, interferon alpha, beta or gamma, tapasin, calnexin, calreticulin, p53, p58, MHC I heavy chain, HSP 70, HSP 90, BIP, GRB94, interferon response proteins 3 and 7.
11. (Original) A method according to claim 10 wherein the accessory molecule is selected from the group consisting of tapasin, calnexin, calreticulin, p58, MHC class I heavy chain,  $\beta_2$ M, LMP2 and LMP7.
12. (Original) A method according to claim 4 wherein the animal is also subjected to surgery, radiation, chemotherapy, immunotherapy or photodynamic therapy.
13. (Canceled)
14. (Original) A method according to claim 1 wherein the agent is administered intraperitoneally, subcutaneously, intravenously, orally, mucosally, submucosally or intradermally.
15. (Original) A method according to claim 4 wherein the agent is administered intraperitoneally, intratumorally, subcutaneously, intravenously, orally, mucosally, submucosally or intradermally.
16. (Currently amended) A method according to claim 1 2 wherein the nucleic acid molecule is in a vector.
17. (Original) A method according to claim 16 wherein the vector is a viral vector.

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18. (Original) A method according to claim 17 wherein the viral vector is selected from the group consisting of vaccinia based vectors, adenovirus based vectors, lenti virus based vectors and HSV based vectors .

19. (Original) A method according to claim 16 wherein the vector is a plasmid.

20. (Currently amended) A method according to claim 19 wherein the plasmid is in a liposome formulation.